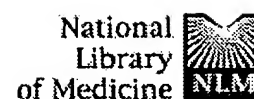
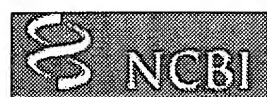


L Number	Hits	Search Text	DB	Time stamp
1	3	chimeric adj10 ecdysone adj receptor and (ostrinia or Manduca or Agrotis or Spodoptera or Chironomus or Locusta) and (LBD or ligand adj binding adj domain) and (hinge adj2 domain)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2004/01/21 06:51
2	6	ecdysone adj receptor and (ostrinia adj nubilalis or Manduca adj sexta or Agrotis adj ilsilon or Spodoptera adj frugiperda or Chironomus adj tentans or Locusta adj migratoria) and (LBD or ligand adj binding adj domain) and (hinge adj2 domain)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2004/01/21 09:14
3	25	ecdysone adj receptor and (ostrinia adj nubilalis or Manduca adj sexta or Agrotis adj ilsilon or Spodoptera adj frugiperda or Chironomus adj tentans or Locusta adj migratoria) and (LBD or ligand adj binding adj domain)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2004/01/21 07:22
4	15	ecdysone adj receptor and (ostrinia adj nubilalis or Manduca adj sexta or Agrotis adj ilsilon or Spodoptera adj frugiperda or Chironomus adj tentans or Locusta adj migratoria or lepidoptera) and (LBD or ligand adj binding adj domain) and hinge	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2004/01/21 07:37
5	15	ecdysone adj receptor and (ostrinia adj nubilalis or Manduca adj sexta or Agrotis adj ilsilon or Spodoptera adj frugiperda or Chironomus adj tentans or Locusta adj migratoria or lepidoptera) and (LBD or ligand adj binding adj domain) and hinge and chimeric	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2004/01/21 07:37
6	14	ecdysone adj receptor and (ostrinia adj nubilalis or Manduca adj sexta or Agrotis adj ilsilon or Spodoptera adj frugiperda or Chironomus adj tentans or Locusta adj migratoria) and (LBD or ligand adj binding adj domain) and (hinge)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2004/01/21 09:14
7	14	ecdysone adj receptor and (ostrinia adj nubilalis or Manduca adj sexta or Agrotis adj ilsilon or Spodoptera adj frugiperda or Chironomus adj tentans or Locusta adj migratoria) and (LBD or ligand adj binding adj domain) and (hinge) and chimeric	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2004/01/21 09:16
8	7	chimeric same ecdysone adj receptor and (ostrinia adj nubilalis or Manduca adj sexta or Agrotis adj ilsilon or Spodoptera adj frugiperda or Chironomus adj tentans or Locusta adj migratoria) and (LBD or ligand adj binding adj domain) and (hinge)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2004/01/21 09:16
-	4	09/393839	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2004/01/07 14:18
-	0	wo200015791	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2004/01/07 14:18
-	577	albertson.in.	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2004/01/07 14:18

-	154	albertsen.in.	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2004/01/07 14:19
-	5	albertsen.in. and ecdysone	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2004/01/07 14:23
-	0	10/606060	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2004/01/07 14:24
-	5	pascal.in. and ecdysone	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2004/01/07 14:26
-	0	maduca adj sexta same ostrinia adj nubilalis	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2004/01/07 14:27
-	0	maduca adj sexta and ostrinia adj nubilalis	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2004/01/07 14:27
-	227	manduca adj sexta and ostrinia adj nubilalis	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2004/01/07 14:27
-	168	manduca adj sexta same ostrinia adj nubilalis	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2004/01/07 14:27
-	2	manduca adj sexta same ostrinia adj nubilalis same (ligand adj binding adj domain or LBD)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2004/01/07 14:28
-	2	manduca adj sexta and ostrinia adj nubilalis same (ligand adj binding adj domain or LBD)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2004/01/07 14:28
-	9	manduca adj sexta same ecdysone adj receptor	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2004/01/07 14:28
-	4	(manduca adj sexta same ecdysone adj receptor) and ostrinia	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2004/01/07 14:29
-	0	chimeric same ecdysone adj recepotr	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2004/01/07 14:29
-	48	chimeric same ecdysone adj receptor	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2004/01/07 14:29

-	30	chimeric same ecdysone adj receptor same (ligand adj binding adj domain or LBD)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2004/01/07 14:33
-	6	chimeric same ecdysone adj receptor same (ligand adj binding adj domain or LBD) and ostrinia and manduca	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2004/01/07 14:35
-	23	chimeric adj10 ecdysone adj receptor	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2004/01/07 14:35
-	9	chimeric adj10 ecdysone adj receptor and (ostrinia or Manduca or Agrotis or Spodoptera or Chironomus or Locusta) and (LBD or ligand adj binding adj domain)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2004/01/07 14:36
-	9	chimeric adj10 ecdysone adj receptor and (ostrinia or Manduca or Agrotis or Spodoptera or Chironomus or Locusta) and (LBD or ligand adj binding adj domain)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2004/01/21 06:50
-	0	w0199902683	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2004/01/07 14:53
-	847	gage.in.	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2004/01/07 14:53
-	0	gage.in. and lepidomteran	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2004/01/07 14:53
-	3	gage.in. and lepidopteran	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2004/01/07 14:53
-	0	gage.in. and lepidopteran and ostrinia	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2004/01/07 14:53
-	0	(gage.in. and lepidopteran and ostrinia) and (ostrinia or Manduca or Agrotis or Spodoptera or Chironomus or Locusta) and (LBD or ligand adj binding adj domain)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2004/01/07 14:54
-	0	(gage.in. and lepidopteran and ostrinia) and (ostrinia or Manduca or Agrotis or Spodoptera or Chironomus or Locusta)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2004/01/07 15:00
-	620	"4833080" or "4981784" or "5171671" or "5262300" or "5534418" or "5614395" or "5641652" or "5688691" or "5707800" or "5710004" or "5874534" or "5880333"	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2004/01/07 15:03
-	40	("4833080" or "4981784" or "5171671" or "5262300" or "5534418" or "5614395" or "5641652" or "5688691" or "5707800" or "5710004" or "5874534" or "5880333") and ecdysone adj receptor	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2004/01/07 15:03

-	5	("4833080" or "4981784" or "5171671" or "5262300" or "5534418" or "5614395" or "5641652" or "5688691" or "5707800" or "5710004" or "5874534" or "5880333") and chimeric adj ecdysone adj receptor	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2004/01/07 15:03
---	---	---	---	---------------------



[Entrez](#)
[PubMed](#)
[Nucleotide](#)
[Protein](#)
[Genome](#)
[Structure](#)
[PMC](#)
[Journals](#)
[Bo](#)

Search for

[Limits](#)
[Preview/Index](#)
[History](#)
[Clipboard](#)
[Details](#)

About Entrez

Text Version

- Search History will be lost after eight hours of inactivity.
- To combine searches use # before search number, e.g., #2 AND #6.
- Search numbers may not be continuous; all searches are represented.

Entrez PubMed

[Overview](#)
[Help | FAQ](#)
[Tutorial](#)
[New/Noteworthy](#)
[E-Utilities](#)

PubMed Services

[Journals Database](#)
[MeSH Database](#)
[Single Citation Matcher](#)
[Batch Citation Matcher](#)
[Clinical Queries](#)
[LinkOut](#)
[Cubby](#)

Related Resources

[Order Documents](#)
[NLM Gateway](#)
[TOXNET](#)
[Consumer Health](#)
[Clinical Alerts](#)
[ClinicalTrials.gov](#)
[PubMed Central](#)

[Privacy Policy](#)

Search	Most Recent Queries	Time	Result
#13	Search locusta ecdysone receptor ligand binding domain hinge	10:22:05	<u>0</u>
#12	Search agrotis ecdysone receptor ligand binding domain hinge	10:21:52	<u>0</u>
#11	Search chironomus ecdysone receptor ligand binding domain hinge	10:21:45	<u>1</u>
#10	Search Spodoptera ecdysone receptor ligand binding domain hinge	10:21:28	<u>0</u>
#9	Search ecdysone receptor ligand binding domain hinge drosophila	10:21:12	<u>1</u>
#7	Search ecdysone receptor ligand binding domain hinge manduca	10:20:37	<u>1</u>
#5	Search ecdysone receptor ligand binding domain hinge chimeric	10:19:20	<u>1</u>
#4	Search ecdysone receptor ligand binding domain hinge region ostrinia nubilalis chimeric	10:19:11	<u>0</u>
#3	Search ecdysone receptor lingand binding domain hinge region ostrinia nubilalis chimeric	10:19:04	<u>0</u>
#2	Search ecdysone receptor lbd hinge region ostrinia nubilalis chimeric	10:18:55	<u>0</u>
#1	Search ecr lbd hinge region ostrinia nubilalis chimeric	10:18:46	<u>0</u>

[Write to the Help Desk](#)
[NCBI](#) | [NLM](#) | [NIH](#)
[Department of Health & Human Services](#)
[Freedom of Information Act](#) | [Disclaimer](#)

Jan 14 2004 16:08:52

* * * * * Welcome to STN International * * * * *

NEWS 1 Web Page URLs for STN Seminar Schedule - N. America
NEWS 2 "Ask CAS" for self-help around the clock
NEWS 3 SEP 09 CA/CAPLUS records now contain indexing from 1907 to the present
NEWS 4 DEC 08 INPADOC: Legal Status data reloaded
NEWS 5 SEP 29 DISSABS now available on STN
NEWS 6 OCT 10 PCTFULL: Two new display fields added
NEWS 7 OCT 21 BIOSIS file reloaded and enhanced
NEWS 8 OCT 28 BIOSIS file segment of TOXCENTER reloaded and enhanced
NEWS 9 NOV 24 MSDS-CCOHS file reloaded
NEWS 10 DEC 08 CABA reloaded with left truncation
NEWS 11 DEC 08 IMS file names changed
NEWS 12 DEC 09 Experimental property data collected by CAS now available in REGISTRY
NEWS 13 DEC 09 STN Entry Date available for display in REGISTRY and CA/CAPLUS
NEWS 14 DEC 17 DGENE: Two new display fields added
NEWS 15 DEC 18 BIOTECHNO no longer updated
NEWS 16 DEC 19 CROPU no longer updated; subscriber discount no longer available
NEWS 17 DEC 22 Additional INPI reactions and pre-1907 documents added to CAS databases
NEWS 18 DEC 22 IFIPAT/IFIUDB/IFICDB reloaded with new data and search fields
NEWS 19 DEC 22 ABI-INFORM now available on STN

NEWS EXPRESS DECEMBER 28 CURRENT WINDOWS VERSION IS V7.00, CURRENT MACINTOSH VERSION IS V6.0b(ENG) AND V6.0Jb(JP), AND CURRENT DISCOVER FILE IS DATED 23 SEPTEMBER 2003

NEWS HOURS STN Operating Hours Plus Help Desk Availability
NEWS INTER General Internet Information
NEWS LOGIN Welcome Banner and News Items
NEWS PHONE Direct Dial and Telecommunication Network Access to STN
NEWS WWW CAS World Wide Web Site (general information)

Enter NEWS followed by the item number or name to see news on that specific topic.

All use of STN is subject to the provisions of the STN Customer agreement. Please note that this agreement limits use to scientific research. Use for software development or design or implementation of commercial gateways or other similar uses is prohibited and may result in loss of user privileges and other penalties.

* * * * * STN Columbus * * * * *

FILE 'HOME' ENTERED AT 12:11:04 ON 21 JAN 2004

=> file medline caplus biosis

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	0.21	0.21

FILE 'MEDLINE' ENTERED AT 12:11:51 ON 21 JAN 2004

FILE 'CAPLUS' ENTERED AT 12:11:51 ON 21 JAN 2004

USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.

PLEASE SEE "HELP USAGETERMS" FOR DETAILS.

COPYRIGHT (C) 2004 AMERICAN CHEMICAL SOCIETY (ACS)

FILE 'BIOSIS' ENTERED AT 12:11:51 ON 21 JAN 2004
 COPYRIGHT (C) 2004 BIOLOGICAL ABSTRACTS INC. (R)

=> s ecdysone (A) receptor (5A) chimeric
 L1 20 ECDYSONE (A) RECEPTOR (5A) CHIMERIC

=> s l1 and hinge
 L2 2 L1 AND HINGE

=> d ibib abs 1-2

L2 ANSWER 1 OF 2 CAPLUS COPYRIGHT 2004 ACS on STN



ACCESSION NUMBER: 2003:633352 CAPLUS
 DOCUMENT NUMBER: 139:174841
 TITLE: Control of gene expression in transgenic plants using
chimeric insect ecdysone receptors and receptor
 cassettes
 INVENTOR(S): Pascal, Erica J.; Valentine, Scott A.; Brown, Jeffrey
 A.; Cockrell, Adam S.; Johnson, Brian D.
 PATENT ASSIGNEE(S): USA
 SOURCE: U.S. Pat. Appl. Publ., 186 pp.
 CODEN: USXXCO
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2003154509	A1	20030814	US 2001-87167	20011024
PRIORITY APPLN. INFO.:			US 2001-87167	20011024

AB Chimeric insect hormone receptors and receptor cassettes are provided as well as methods for their use in regulating expression of target polypeptides in plants in the presence of appropriate chem. ligands. In particular, each receptor cassette encodes a receptor polypeptide that comprises a DNA binding domain (D), a **hinge** region (H), a ligand binding domain (L) and an activation domain (A). According to one embodiment, the H and L domains are from two different insect ecdysone receptors. According to another embodiment, the receptor cassettes are chimeric in that one or more of the D or A domains are obtained from a source heterologous with respect to the other domains present in the chimeric receptor cassette, e.g., the D domain may be from GAL4 and the A domain from VP16. Thus, numerous expression plasmids encoding **chimeric ecdysone receptors** (EcRs) contg. domains from Manduca sexta, Agrotis ipsilon, Spodoptera frugiperda, Chironomus tentans, Locusta migratoria, Ostrinia nubilalis, and Drosophila melanogaster were prep'd. Maize and tobacco cells transformed with these plasmids exhibited tebufenozide-stimulated expression of reporter genes.

L2 ANSWER 2 OF 2 CAPLUS COPYRIGHT 2004 ACS on STN



ACCESSION NUMBER: 2002:595026 CAPLUS
 DOCUMENT NUMBER: 137:164639
 TITLE: **Chimeric ecdysone receptors** and genes encoding
 them for control of gene expression in plants
 INVENTOR(S): Pascal, Erica Judith; Valentine, Scott Arthur; Brown,
 Jeffrey Arthur; Cockrell, Adam Scott; Johnson, Brian

David
 PATENT ASSIGNEE(S): Syngenta Participations Ag, Switz.
 SOURCE: PCT Int. Appl., 319 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
<u>WO 2002061102</u>	A2	20020808	<u>WO 2001-US51417</u>	20011024
<u>WO 2002061102</u>	A3	20030821		
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
RW:	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			
<u>EP 1356066</u>	A2	20031029	<u>EP 2001-999203</u>	20011024
R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR			

PRIORITY APPLN. INFO.:
 US 2000-242969P P 20001024
 WO 2001-US51417 W 20011024

AB Chimeric insect hormone receptors and receptor cassettes are provided as well as methods for their use in regulating expression of target polypeptides in plants in the presence of appropriate chem. ligands. In particular, each receptor cassette encodes a receptor polypeptide that comprises a DNA binding domain (D), a **hinge** region (H), a ligand binding domain (L) and an activation domain (A). According to one embodiment, the H and L domains are from two different insect ecdysone receptors. According to another embodiment, the receptor cassettes are chimeric in that one or more of the D or A domains are obtained from a source heterologous with respect to the other domains present in the chimeric receptor cassette, e.g., the D domain may be from GAL4 and the A domain from VP16. Thus, numerous expression plasmids encoding **chimeric ecdysone receptors** contg. domains from Manduca sexta, Agrotis ipsilon, Spodoptera frugiperda, Chironomus tentans, Locusta migratoria, Ostrinia nubilalis, and Drosophila melanogaster were prepd. Maize and tobacco cells transformed with these plasmids exhibited tebufenozide-stimulated expression of reporter genes.

=> s hinge (S) ligand (A) binding and ecdysone (A) receptor
 L3 8 HINGE (S) LIGAND (A) BINDING AND ECDYSONE (A) RECEPTOR

=> d ibib abs 1-3

L3 ANSWER 1 OF 8 MEDLINE on STN

Full Text	Citing References
-----------	-------------------

ACCESSION NUMBER: 1999348185 MEDLINE
 DOCUMENT NUMBER: 99348185 PubMed ID: 10417731
 TITLE: Ecdysone agonist inducible transcription in transgenic tobacco plants.
 AUTHOR: Martinez A; Sparks C; Hart C A; Thompson J; Jepson I
 CORPORATE SOURCE: ZENECA Agrochemicals, Jealott's Hill Research Stsation,

SOURCE: Bracknell, Berkshire, UK.. Alberto.Martinez@AGUK.Zeneca.com
 PLANT JOURNAL, (1999 Jul) 19 (1) 97-106.
 Journal code: 9207397. ISSN: 0960-7412.
 PUB. COUNTRY: ENGLAND: United Kingdom
 DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
 LANGUAGE: English
 FILE SEGMENT: Priority Journals
 OTHER SOURCE: GENBANK-Y09009
 ENTRY MONTH: 199910
 ENTRY DATE: Entered STN: 19991014
 Last Updated on STN: 19991014
 Entered Medline: 19991005

AB A novel chemical-induced gene regulatory system for plants consisting of two molecular components is described. The first, or regulatory, cassette comprises a chimeric receptor composed of the **hinge** and **ligand binding** domains of the *Heliothis virescens* **ecdysone receptor** and the transactivation domain of the Herpes simplex VP16 protein fused to the DNA binding domain and transactivation of a mammalian glucocorticoid receptor. The second component, a reporter cassette, contains six copies of the glucocorticoid response element (GRE) fused to the minimal 35SCaMV promoter and beta-glucuronidase. The system uses a commercially available non-steroidal ecdysone agonist, RH5992 (tebufenozide), as an inducer. Activation of gene expression is shown in both tobacco transient protoplasts and transgenic plants. The response is ligand dependent and is modulated by the change in minimal promoter context. The system is capable of inducing transgene activity up to 420-fold corresponding to 150% of the activity observed with positive controls (35SCaMV:GUS).

L3 ANSWER 2 OF 8 MEDLINE on STN

Full Text Citing References

ACCESSION NUMBER: 96191152 MEDLINE
 DOCUMENT NUMBER: 96191152 PubMed ID: 8641050
 TITLE: Cloning and developmental expression of the **ecdysone receptor** gene from the spruce budworm, *Choristoneura fumiferana*.
 AUTHOR: Kothapalli R; Palli S R; Ladd T R; Sohi S S; Cress D; Dhadialla T S; Tzertzinis G; Retnakaran A
 CORPORATE SOURCE: Canadian Forest Service--Saulte St. Marie, Ontario, Canada.
 SOURCE: DEVELOPMENTAL GENETICS, (1995) 17 (4) 319-30.
 Journal code: 7909963. ISSN: 0192-253X.
 PUB. COUNTRY: United States
 DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
 LANGUAGE: English
 FILE SEGMENT: Priority Journals
 OTHER SOURCE: GENBANK-U29531
 ENTRY MONTH: 199607
 ENTRY DATE: Entered STN: 19960726
 Last Updated on STN: 19960726
 Entered Medline: 19960716

AB Degenerate oligonucleotides were designed on the basis of conserved amino acid sequences in the DNA and ligand-binding regions of the members of the steroid hormone receptor superfamily. Using these oligonucleotides in RNA-PCR, a cDNA fragment was isolated from the spruce budworm, *Choristoneura fumiferana*. Comparison of the deduced amino acid sequence of this cDNA fragment with the members of the steroid hormone receptor superfamily suggested that this PCR fragment is a region of the **ecdysone receptor** from *C. fumiferana*. Using this cDNA fragment as a probe, 10 clones were isolated from a cDNA library that was constructed using the RNA from 4- and 5-day old embryos of *C. fumiferana*. Two cDNA clones (1.3

and 3 kb) that overlap and show amino acid identity with *Drosophila melanogaster* **ecdysone receptor** B-1 isoform (DmEcR) were characterized and sequenced. The longest open reading frame had 539 codons and covered the complete EcR coding region. The deduced amino acid sequence of this open reading frame had all five of the regions typical for a steroid hormone nuclear receptor. The C domain or DNA binding region showed the highest identity with EcR proteins from *D. melanogaster*, *Chironomus tentans*, *Aedes aegypti*, *Manduca sexta*, and *Bombyx mori*. The A/B region, D domain or **hinge** region, E domain, or **ligand binding** region also showed significant amino acid similarity with the EcR proteins from the five insects mentioned above. The *C. fumiferana* ecdysteroid receptor (CfEcR) cDNA probe detected a 6.0-kb mRNA that was present throughout the development of *C. fumiferana*. The CfEcR mRNA increases in abundance at the time of the ecdysteroid peak during the molting phase in the embryonic, larval and pupal stages but remains low during the intermolt period. In the 6th instar larvae, the 6-kb CfEcR mRNA was detected in the epidermis, fat body, and midgut and maximum expression was observed during the prepupal peak of ecdysteroids in the hemolymph. CfEcR mRNA was induced in ecdysone treated CF-203 cells as well in the epidermis and midgut of larvae that were fed the nonsteroidal ecdysteroid agonist, RH-5992. The induction occurred within an hour and reached maximum levels around 3 hr, after which it decreased to the basal level by 6 hr. In vitro transcription and translation of the CfEcR cDNA yielded a 67-Kda protein that bound to the ecdysone response element (EcRE) as a heterodimer, along with the ultraspiracle protein.

L3 ANSWER 3 OF 8 CAPLUS COPYRIGHT 2004 ACS on STN



ACCESSION NUMBER: 2003:633352 CAPLUS
 DOCUMENT NUMBER: 139:174841
 TITLE: Control of gene expression in transgenic plants using chimeric insect **ecdysone receptors** and receptor cassettes
 INVENTOR(S): Pascal, Erica J.; Valentine, Scott A.; Brown, Jeffrey A.; Cockrell, Adam S.; Johnson, Brian D.
 PATENT ASSIGNEE(S): USA
 SOURCE: U.S. Pat. Appl. Publ., 186 pp.
 CODEN: USXXCO
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2003154509	A1	20030814	US 2001-87167	20011024
PRIORITY APPLN. INFO.:			US 2001-87167	20011024

AB Chimeric insect hormone receptors and receptor cassettes are provided as well as methods for their use in regulating expression of target polypeptides in plants in the presence of appropriate chem. ligands. In particular, each receptor cassette encodes a receptor polypeptide that comprises a DNA binding domain (D), a **hinge** region (H), a **ligand binding** domain (L) and an activation domain (A). According to one embodiment, the H and L domains are from two different insect **ecdysone receptors**. According to another embodiment, the receptor cassettes are chimeric in that one or more of the D or A domains are obtained from a source heterologous with respect to the other domains present in the chimeric receptor cassette, e.g., the D domain may be from GAL4 and the A domain from VP16. Thus, numerous expression plasmids encoding chimeric

ecdysone receptors (ECRs) contg. domains from *Manduca sexta*, *Agrotis ipsilon*, *Spodoptera frugiperda*, *Chironomus tentans*, *Locusta migratoria*, *Ostrinia nubilalis*, and *Drosophila melanogaster* were prep'd. Maize and tobacco cells transformed with these plasmids exhibited tebufenozide-stimulated expression of reporter genes.

=> d 4-8

L3 ANSWER 4 OF 8 CAPLUS COPYRIGHT 2004 ACS on STN

Full Text	Citing References
-----------	-------------------

AN 2002:595026 CAPLUS

DN 137:164639

TI Chimeric **ecdysone receptors** and genes encoding them for control of gene expression in plants

IN Pascal, Erica Judith; Valentine, Scott Arthur; Brown, Jeffrey Arthur; Cockrell, Adam Scott; Johnson, Brian David

PA Syngenta Participations Ag, Switz.

SO PCT Int. Appl., 319 pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
<u>WO 2002061102</u>	A2	20020808	<u>WO 2001-US51417</u>	20011024
<u>WO 2002061102</u>	A3	20030821		
W:				
AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW:				
GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
<u>EP 1356066</u>	A2	20031029	<u>EP 2001-999203</u>	20011024
R:				
AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
<u>PRAI US 2000-242969P</u>	P	20001024		
<u>WO 2001-US51417</u>	W	20011024		

L3 ANSWER 5 OF 8 CAPLUS COPYRIGHT 2004 ACS on STN

Full Text	Citing References
-----------	-------------------

AN 1999:561349 CAPLUS

DN 132:76163

TI Ecdysone agonist inducible transcription in transgenic tobacco plants

AU Martinez, Alberto; Sparks, Caroline; Hart, Cliff A.; Thompson, John; Jepson, Ian

CS ZENECA Agrochemicals, Jealott's Hill Research Station, Bracknell, Berkshire, RG42 6ET, UK

SO Plant Journal (1999), 19(1), 97-106

CODEN: PLJUED; ISSN: 0960-7412

PB Blackwell Science Ltd.

DT Journal

LA English

RE.CNT 34 THERE ARE 34 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 6 OF 8 CAPLUS COPYRIGHT 2004 ACS on STN

Full Text	Citing References
-----------	-------------------

AN 1996:150133 CAPLUS
 DN 124:253689
 TI Cloning and developmental expression of the **ecdysone receptor** gene from the spruce budworm, *Choristoneura fumiferana*
 AU Kothapalli, Ravi; Palli, Subba R.; Ladd, Tim R.; Sohi, Sardar S.; Cress, Dean; Dhadialla, Tarlochan S.; Tzertzinis, George; Retnakaran, Arthur
 CS Canadian Forest Service, Saulte St. Marie, ON, P6A 5M7, Can.
 SO Developmental Genetics (New York) (1995), 17(4), 319-30
 CODEN: DGNTDW; ISSN: 0192-253X
 PB Wiley-Liss
 DT Journal
 LA English

L3 ANSWER 7 OF 8 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN

Full Text	Citing References
-----------	-------------------

AN 1999:416009 BIOSIS
 DN PREV199900416009
 TI Ecdysone agonist inducible transcription in transgenic tobacco plants.
 AU Martinez, Alberto [Reprint author]; Sparks, Caroline; Hart, Cliff A.; Thompson, John; Jepson, Ian
 CS Jealott's Hill Research Station, ZENECA Agrochemicals, Bracknell, Berkshire, RG42 6ET, UK
 SO Plant Journal, (July, 1999) Vol. 19, No. 1, pp. 97-106. print.
 ISSN: 0960-7412.
 DT Article
 LA English
 ED Entered STN: 18 Oct 1999
 Last Updated on STN: 18 Oct 1999

L3 ANSWER 8 OF 8 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN

Full Text	Citing References
-----------	-------------------

AN 1996:122936 BIOSIS
 DN PREV199698695071
 TI Cloning and development expression of the **ecdysone receptor** gene from the spruce budworm, *Choristoneura fumiferana*.
 AU Kothapalli, Ravi [Reprint author]; Palli, Subba R.; Ladd, Tim R.; Sohi, Sardar S.; Cress, Dean; Dhadialla, Tarlochan S.; Tzertzinis, George; Retnakaran, Arthur
 CS Canadian Forest Serv., Saulte-St. Marie, Natl. Resources Canada, 1219 Queen St. E., Saulte-St. Marie, ON P6A 5M7, Canada
 SO Developmental Genetics, (1995) Vol. 17, No. 4, pp. 319-330.
 CODEN: DGNTDW. ISSN: 0192-253X.
 DT Article
 LA English
 ED Entered STN: 27 Mar 1996
 Last Updated on STN: 27 Mar 1996

=> s "atgcagcagctatatgtggatttttttagccctgccttc?"

L4 0 "ATGCAGCAGCTATATGTGGATTTTTTTAGCCCTGCCTTC?"

=> ATGCAGCAGCTATATGTGGATTTTTTTAGCCCTGCCTTC?

ATGCAGCAGCTATATGTGGATTTTTTTAGCCCTGCCTTC? IS NOT A RECOGNIZED COMMAND
 The previous command name entered was not recognized by the system.

For a list of commands available to you in the current file, enter
"HELP COMMANDS" at an arrow prompt (=>).

```
=> s ATGCAGCAGCTATATGTGGATTTTTTTAGCCCTGCCTTC?
L5          0 ATGCAGCAGCTATATGTGGATTTTTTTAGCCCTGCCTTC?
```

```
=> s mqqlyvbfspaf?
L6          0 MQQLYVBFFSPAF?
```

```
=> s ?ATGCAGCAGCTATATGTGGATTTTTTTAGCCCTGCCTTC?
L7          0 ?ATGCAGCAGCTATATGTGGATTTTTTTAGCCCTGCCTTC?
```

```
=> s MKLLSSIEQAC?
L8          0 MKLLSSIEQAC?
```

```
=> s ?atgaagctgtcttctatcgaacaagca?
L9          0 ?ATGAAGCTGTCTTCTATCGAACAAGCA?
```

```
=> file registry
COST IN U.S. DOLLARS          SINCE FILE      TOTAL
                               ENTRY      SESSION
FULL ESTIMATED COST          55.29      55.50

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)  SINCE FILE      TOTAL
                                               ENTRY      SESSION
CA SUBSCRIBER PRICE          -2.08      -2.08
```

FILE 'REGISTRY' ENTERED AT 12:26:12 ON 21 JAN 2004
 USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
 PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
 COPYRIGHT (C) 2004 American Chemical Society (ACS)

Property values tagged with IC are from the ZIC/VINITI data file
 provided by InfoChem.

STRUCTURE FILE UPDATES: 20 JAN 2004 HIGHEST RN 639777-15-4
 DICTIONARY FILE UPDATES: 20 JAN 2004 HIGHEST RN 639777-15-4

TSCA INFORMATION NOW CURRENT THROUGH JULY 14, 2003

Please note that search-term pricing does apply when
 conducting SmartSELECT searches.

Crossover limits have been increased. See HELP CROSSOVER for details.

Experimental and calculated property data are now available. For more
 information enter HELP PROP at an arrow prompt in the file or refer
 to the file summary sheet on the web at:
<http://www.cas.org/ONLINE/DBSS/registryss.html>

```
=> s ?atgaagctgtcttctatcgaacaagca?
LEFT TRUNCATION IGNORED FOR '?ATGAAGCTGTCTTCTATCGAACAAGCA?' FOR FILE 'REGISTRY'
L10          0 ATGAAGCTGTCTTCTATCGAACAAGCA?
Left truncation is not valid in the specified search field in the
specified file. The term has been searched without left truncation.
Examples: '?TERPEN?' would be searched as 'TERPEN?' and '?FLAVONOID'
would be searched as 'FLAVONOID.'
```

If you are searching in a field that uses implied proximity, and you
 used a truncation symbol after a punctuation mark, the system may

interpret the truncation symbol as being at the beginning of a term.
Implied proximity is used in search fields indexed as single words,
for example, the Basic Index.

=> s MKLLSSIEQAC?

L11 0 MKLLSSIEQAC?

=> s mqqlyvbfspaf?

L12 0 MQQLYVBFFSPAF?

=> d his

(FILE 'HOME' ENTERED AT 12:11:04 ON 21 JAN 2004)

FILE 'MEDLINE, CAPLUS, BIOSIS' ENTERED AT 12:11:51 ON 21 JAN 2004

L1 20 S ECDYSONE (A) RECEPTOR (5A) CHIMERIC
L2 2 S L1 AND HINGE
L3 8 S HINGE (S) LIGAND (A) BINDING AND ECDYSONE (A) RECEPTOR
L4 0 S "ATGCAGCAGCTATATGTGGATTTTTTTAGCCCTGCCTTC?"
L5 0 S ATGCAGCAGCTATATGTGGATTTTTTTAGCCCTGCCTTC?
L6 0 S MQQLYVBFFSPAF?
L7 0 S ?ATGCAGCAGCTATATGTGGATTTTTTTAGCCCTGCCTTC?
L8 0 S MKLLSSIEQAC?
L9 0 S ?ATGAAGCTGTCTTCTATCGAACAAGCA?

FILE 'REGISTRY' ENTERED AT 12:26:12 ON 21 JAN 2004

L10 0 S ?ATGAAGCTGTCTTCTATCGAACAAGCA?
L11 0 S MKLLSSIEQAC?
L12 0 S MQQLYVBFFSPAF?

=>